UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
MURPHY, DILLON J

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/024,726	COLEMAN, ROBERT M.
	Examiner	Art Unit
	Dillon J. Murphy	2624

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 September 2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-14_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-14_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 September 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

- This action is responsive to the amendment filed on September 22, 2005.

- Claims 1-14 are pending. Claims 13 and 14 are new.

- Amendments to the drawings and the specification are acknowledged and

  accepted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 8, 9, and 12-14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Smith et al. (US 5,704,021), and Dermer (US 5668931), hereafter

referred to as Smith and Dermer.

Regarding claim 1, Smith teaches a printing system, comprising:

A printer (Smith, figure 1, #56, printer); and

A printer control device (Smith, figure 1, #32, Color Printer Driver in computer

#44) for retrieving printer-independent print-quality characteristics associated with

image elements (Smith, col 7, ln 35-39, color modes are set for different objects such as

text, graphics, and photographic images) in a document to be printed by said printer and

for associating printer-dependent imaging actions with the printer-independent print-

quality characteristics (Smith, figure 5, image object "text," #85, has printer-independent

print quality characteristics such as vivid color #82, match screen #83, and no

adjustment #84, associated with printer dependent imaging actions such as halftoning

options cluster #91, Pattern #92, and Scatter #93). Smith does not disclose expressly a

printing system wherein a printer-independent print-quality characteristic comprises

instructions for indicating a feature of an image element that is to be preserved during

rendering without specifying any printer-specific imaging actions needed to achieve the

feature, and wherein printer-dependent imaging actions associated with the printer-

independent print-quality characteristic comprise specific imaging actions taken by the

printer to achieve the feature of the image element to be preserved during rendering.

Dermer, however, teaches a printing system (Dermer, fig 1, showing block diagram of a

printing system (col 4, ln 34-35) comprising a trapping module #124 receiving a source

image file #120 as a PDL (col 8, ln 60-63), wherein the trapping module performs

trapping on said source image file, and outputs a trapped image file #126 as a PDL

again. See col 9, ln 56-67, and col 10, ln 1-5, wherein trapped image file is output as a

PDL as print data for printing press #138 of fig 1) wherein a printer-independent print-

quality characteristic comprises instructions for indicating a feature of an image element

that is to be preserved during rendering without specifying any printer-specific imaging

actions needed to achieve the feature (Dermer, fig 1, modules #120, #124, and #126,

trapping characteristics are indicated for a feature of an image element, i.e. print

independent print quality characteristics indicate features of an image element to be

preserved during rendering without specifying printer-specific imaging actions. It is well

known in the art that performing trapping on an image within a PDL is in a device

independent format, therefore trapping is a printer-independent print quality

characteristic. See also col 7, ln 62-67, and col 8, ln 1-11 (Dermer), wherein printer

dependent actions such as halftoning and rasterizing are performed after print-

independent print quality characteristics are applied to the image in modules #128 and

#130 of fig 1), and wherein printer-dependent imaging actions associated with the

printer-independent print-quality characteristic comprise specific imaging actions taken

by the printer to achieve the feature of the image element to be preserved during

rendering (Dermer, col 7, ln 62-67, trapped image are input into an assembly and

separation module to be converted into halftone representation, i.e. printer dependent

imaging actions are taken to achieve the preserved image element).

Smith and Dermer are combinable because they are from a similar field of

endeavor of print data generation and printing said data. At the time of the invention, it

would have been obvious to a person of ordinary skill in the art to combine the print

system of Dermer comprising generating a PDL comprising the printer-independent

print-quality characteristics comprising instructions for indicating a feature of an image

element such that when printer-dependent imaging actions are associated with the

printer-independent print quality characteristics, actions taken by the printer achieve the

feature of the image element with the print system of Smith comprising a printer and a

print control device for associating printer dependent imaging actions with printer-

independent print quality characteristics. The motivation for doing so would have been

to provide a method and apparatus for processing digital data representing a graphic

image to compensate for printing plate misregistration (Dermer, col 4, ln 34-36).

Therefore, it would have been obvious to combine Dermer with Smith to obtain the

invention as specified in claim 1.

. Regarding claim 2, which depends from claim 1, the combination of Smith and

Dermer teaches a printing system further comprising a user interface having a control

for associating printer-independent print-quality characteristics with printer-dependent

imaging actions (Smith, figure 5, showing user interface #80 for associating

independent and dependent characteristics and actions).

Regarding claim 3, which depends from claim 1, the combination of Smith and

Dermer teaches a printing system further comprising a user interface having a first

control for invoking an option of automatically associating printer-independent print-

quality characteristics with printer-dependent imaging actions in accordance with a set

of predetermined associations (Smith, figure 4, user interface screen #60' shows first

control #62' for automatically associating independent and dependent characteristics

and actions) and a second control for manually associating printer-independent print-

quality characteristics with printer-dependent imaging actions (Smith, figure 4, user

interface screen #60' shows second control #63' for manually associating independent

and dependent characteristics and actions).

Regarding claim 4, which depends from claim 3, the combination of Smith and

Dermer teaches a printing system further comprising a third control for defining a

custom printer-independent print-quality characteristic and for associating printer-

dependent imaging actions with said custom printer-independent print-quality

characteristic (Smith, figure 5, lightness slider #96, providing the user with custom

control of the lightness of a document, col 7, ln 25-45).

Regarding claim 8, the combination of Smith and Dermer teaches a method for

controlling the quality of printing, comprising:

Providing a list of printer-dependent imaging actions (Smith, figure 5, list of

printer-dependent imaging actions comprises halftone control of Cluster #91, Pattern

#92, and Scatter #93);

Providing a list of printer-independent print-quality characteristics (Smith, figure

5, list of printer-independent print-quality characteristic comprises Vivid-Color #82,

Match Screen #83, and No Adjustment #84), wherein a printer-independent print-quality

characteristic comprises instructions for indicating a feature of an image element that is

to be preserved during rendering without specifying any printer-specific imaging actions

needed to achieve the feature (Dermer, fig 1, modules #120, #124, and #126, trapping

characteristics are indicated for a feature of an image element, i.e. print independent

print quality characteristics indicate features of an image element to be preserved

during rendering without specifying printer-specific imaging actions. It is well known in

the art that performing trapping on an image within a PDL is in a device independent

format, therefore trapping is a printer-independent print quality characteristic. See also

col 7, ln 62-67, and col 8, ln 1-11 (Dermer), wherein printer dependent actions such as

halftoning and rasterizing are performed after print-independent print quality

characteristics are applied to the image in modules #128 and #130 of fig 1);

Selecting a printer-independent print-quality characteristic from the list of printer-independent print-quality characteristics (Smith, figure 5, selection is made through user interface as a dot in a bubble, #85'); and

Associating at least one printer-dependent imaging action with the selected printer-independent print-quality characteristic (Smith, figure 5, association is made in a tabular format, wherein printer-independent print-quality characteristics and printer-dependent imaging actions are grouped together with image object "text" #85), wherein printer-dependent imaging actions associated with the printer-independent print-quality characteristic comprise specific imaging actions taken by the printer to achieve the feature of the image element to be preserved during rendering (Dermer, col 7, ln 62-67, trapped image are input into an assembly and separation module to be converted into halftone representation, i.e. printer dependent imaging actions are taken to achieve the preserved image element).

Regarding claim 9, which depends from claim 8, the combination of Smith and Dermer teaches a method further comprising:

Defining a custom printer-independent print-quality characteristic (Smith, figure 5, lightness slider #96, allowing the user custom control of the lightness of a document, col 7, ln 25-45);

Adding the custom printer-independent print-quality characteristic to the list of printer-independent print-quality characteristics (Smith, figure 5, lightness control is currently added to list, while applying custom slider control assures association with printer-dependent imaging actions); and

Associating at least one printer-dependent imaging action with said custom printer-independent print-quality characteristic (Smith, figure 5, association is made in a tabular format, wherein printer-independent print-quality characteristics and printer-dependent imaging actions are grouped together with image object "text" #85). Regarding claim 12, which depends from claim 8, the combination of Smith and Dermer teaches a method of controlling the quality of printing further comprising providing a default configuration of associations (Smith, figure 5, defaults control #98 selects a default configuration of associations. See also Dermer, fig 24, teaching saving trap settings #2436, loading trap settings #2434, and providing automatic trap settings, i.e. default trap settings, #2430).

Regarding claim 13, which depends from claim 1, the combination of Smith and Dermer teaches a print system wherein the printer-independent print-quality characteristics comprise at least one of "make sharp edges," reduce mottle," distinguish neighboring colors," reduce moiré," "distinguish tone and edges," "maximum tone depth," perceptual colors," "contour," "no abutting corners," "increase moiré," uniform gloss," "distinctness" and "compress without loss of detail" (Smith et al., fig 5 #82, and col 8, ln 17-20, wherein one printer-independent print quality characteristic is perceptual color, i.e. vivid color. See also Dermer, fig 1, #124 trapping module, wherein printer-independent print-quality characteristic comprises "distinguish neighboring colors," i.e. trapping).

Regarding claim 14, which depends from claim 8, the combination of Smith and Dermer teaches a method for controlling the quality of printing wherein the printer-

independent print-quality characteristics comprise at least one of "make sharp edges," reduce mottle," distinguish neighboring colors," reduce moiré," "distinguish tone and edges," "maximum tone depth," perceptual colors," "contour," "no abutting corners," "increase moiré," uniform gloss," "distinctness" and "compress without loss of detail" (Smith et al., fig 5 #82, and col 8, In 17-20, wherein one printer-independent print quality characteristic is perceptual color, i.e. vivid color. See also Dermer, fig 1, #124 trapping module, wherein printer-independent print-quality characteristic comprises "distinguish neighboring colors," i.e. trapping).

Claims 5-7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (5,704,021), Dermer (US 5668931), and Goertz et al. (US 6,173,295), hereafter referred to as Smith, Dermer, and Goertz.

Regarding claim 5, which depends from claim 3, the combination of Smith and Dermer teaches a printing system comprising a printer and a print control device for automatically and manually associating printer-independent print-quality characteristics with printer-dependent imaging actions, wherein a printer-independent print-quality characteristic preserves a feature of an image element during rendering, and wherein printer-dependent actions are associated with the printer-independent print-quality characteristics upon rendering, as explained in the rejection of claim 3 above. Smith does not teach a printing system further comprising a third control for saving a set of associations. Goertz, however, discloses a printing system with control for saving a set of associations between printer-independent print-quality characteristics and printer-

dependent imaging actions (Goertz, figure 8, shows submenu #80 providing control for saving job ticket, wherein the job ticket stores print attribute information and location of print files, col 5, ln 41-43. See also Dermer, fig 24, wherein "save trap" radio button #2436 is used to save a set of associations between printer-independent print-quality characteristics and printer-dependent imaging actions).

Smith, Dermer, and Goertz are combinable because they are from the same field of endeavor of print attribute processing in a printing system. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the feature of saving the set of associations of Goertz with the printer and print controller of the combination of Smith and Dermer for automatic, manual, and custom association of printer-independent and printer-dependent characteristics and actions. The motivation for doing so would have been to create a job ticket that provides an improved system for organizing the information needed to prepare a print job comprised of multiple file items having different print attributes (Goertz, col 3, ln 11-14), and to allow the user to save the associations for later use. Therefore, it would have been obvious to combine Goertz with the aforementioned combination of Smith and Dermer to obtain the invention as specified in claim 5.

Regarding claim 6, which depends from claim 5, the combination of Smith, Dermer, and Goertz teaches a printing system further comprising a fourth control for loading said saved set of associations (Goertz, figure 8, shows submenu #80 providing control for loading (opening) job ticket).

Regarding claim 7, which depends from claim 5, the combination of Smith,

Dermer, and Goertz teaches a printing system further comprising a fifth control for

selecting a default configuration of associations (Smith, figure 5, defaults control #98

selects a default configuration of associations).

Regarding claim 10, which depends from claim 8, the combination of Smith,

Dermer, and Goertz teaches a method for controlling the quality of printing further

comprising saving a selected configuration of associations (Goertz, figure 8, shows

submenu #80 providing control for saving job ticket, wherein the job ticket stores print

attribute information and location of print files, col 5, ln 41-43).

Regarding claim 11, which depends from claim 10, the combination of Smith,

Dermer, and Goertz teaches a method for controlling the quality of printing further

comprising loading a saved selected configuration of associations (Goertz, figure 8,

shows submenu #80 providing control for loading (opening) a previously saved job

ticket).

Response to Arguments

Applicant's arguments filed September 22, 2005 have been fully considered but

they are not persuasive.

Applicant argues (page, 9, ln 3-8) that Smith ('021) does not teach or suggest

printer-independent print-quality characteristics, which are associated with image

elements in a document to be printed. Even though Smith ('021) does not explicitly state

a printer-independent print-quality characteristic, his system does meet the claimed

limitations. For instance, whenever automatic color is selected, the default controls are used within that option to preserve the feature (color) during rendering. This corresponds to what the applicant claims as printer-independent print-quality characteristics.

The user does not specify any other characteristic or features. Therefore, the user would not specify printer dependent actions. In the alternative, whenever the user selects manual color, this also corresponds with the printer-independent print-quality characteristics of vivid color, match screen, no adjust, halftone, cluster, pattern scatter because it achieves the image the user desires to be preserved (i.e. preserve vivid colors) during rendering. Selecting these does not specify amount of ink used or half tone pattern used. While applicant may have intended to distinguish over Smith (1021), the limitations "printer independent," "printer dependent," "element to be preserved," "specific imaging actions," and "perceptual colors" are broad enough that Smith ('021) meets these limitations.

Applicant also argues, on page 9, ln 15-20, that Goertz does not teach or suggest printer-independent print-quality characteristics. The examiner is not citing Goertz as teaching the printer-independent print-quality characteristics, although the examiner is citing Goertz for teaching a system and method for saving, loading, and selecting a set of associations. Additionally meeting these limitations, see fig 24 of Dermer, teaching saving trap settings #2436, loading trap settings #2434, and providing automatic trap settings, i.e. default trap settings, #2430.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Estrada et al. reference, US 6970271, is cited for teaching a system and method for device-independent trapping of PDL files.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dillon J. Murphy whose telephone number is (571) 272-5945. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

DOUGLAS Q. TRAN
PRIMARY EXAMINER